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ABSTRACT

A study examined how teachers' attitudes and beliefs affect their enactment of literature-based curriculum materials, whether student attitudes differ in accordance with the teacher's orientation, and whether student achievement in reading and writing differ in whole language and traditional classrooms. Two "whole language" and two "traditional" teachers in four intact suburban fourth-grade classrooms in southern California were chosen. Teachers were observed for over 100 hours over 1 year. Pretest and posttest reading and writing attitude measures, and reading achievement tests were administered. Writing samples were taken at three points. Analysis of teacher, principal, and student interviews present the insider's view of the classroom. No statistically significant differences were found in reading. On attitude measures classes were split between one whole language and one traditional teacher. Students in the traditional teachers' classes significantly outscored those in whole language classes on writing measures. Results presented represent work in progress with full data analysis to be completed in June 1993. Analysis of qualitative data is incomplete. (Eight tables of data are included; 30 references are attached.) (RS)

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The Integrated Language Arts:

Curriculum Enactments in Whole Language and Traditional Fourth Grade Classrooms

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The Integrated Language Arts:

Curriculum Enactments in
Whole Language and Traditional Fourth Grade Classrooms

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ABSTRACT

This study examines four intact suburban fourth-grade classrooms in Southern California. DeFord's (1985) TORP was used with interview and observation to select two "whole language" and two "traditional" teachers. Questions guiding the research included: How do teachers' attitudes and beliefs affect their enactment of the literature-based curriculum materials? Do student attitudes in reading and writing differ in accordance with the teacher's orientation? Does student achievement in reading and writing differ over time in whole language and traditional classrooms? Beginning with the start of year-round school in July 1992, and concluding in early February 1993, over one hundred hours of observation describe the curriculum enactments of the teachers. Pretest and posttest reading and writing attitude measures, and reading achievement tests were administered. Writing samples were taken at three points. Analysis of teacher, principal, and student interviews present the insider's view of the classroom. No statistically significant differences were found in reading. On attitude measures classes were split between one whole language and one traditional teacher. Students in the traditional teachers' classes significantly outscored those in whole language classes on writing measures. Qualitative data provides a detailed description of the classes and offers explanations for the findings.

The Problem of Educational Reform in the Language Arts

As part of a larger reform agenda, language and reading instruction have undergone substantial changes throughout the nation in the past decade. For example, language instruction in California changed substantially in 1987 with the implementation of a new English/Language Arts Framework, and in 1989 with the adoption by school districts across the state of literature-based reading series which replaced basal reading series. In a pilot study conducted in 1991, an examination of the Framework, and of one of the state adopted series (Houghton-Mifflin, 1989) revealed substantial differences in the theoretical basis of the approach to teaching literacy skills, and in the intended strategies for reading and writing instruction (Grisham, 1992). Specifically, the Framework mandates an integrated language arts program where reading, writing, speaking, and listening are parts of a whole language approach emphasizing communicative competence and higher order thinking skills. The traditional structures associated with reading instruction, such as readiness programs, ability grouping, seatwork, and emphasis on hierarchical skills instruction have been altered in the current curriculum materials.

A serious crisis has been created in literacy instruction because traditional reading programs originated from a view of reading as a hierarchically organized set of skills acquired by first assembling the "pieces" and then practicing them until they were internalized. For decades, research in reading focused more on the behaviors of reading (see, for example, Carroll, 1976) and reading was taught using the basal series. According to Lapp and Flood (1983), the premise underlying the basal reading method is that, "reading is a developmental task involving the acquisition of major skills, and that each of these major skills is comprised of many subskills. These subskills vary in difficulty and complexity and, therefore, need to be introduced to the reader in a logical, prescribed order (p. 294)."

Many teachers teaching today were trained in this behaviorist view of the reading process. The change in terminology itself, from "reading instruction" to "integrated language arts instruction" (Framework, 1987) is indicative of the major shift in the emphasis of literacy instruction.

In California, the reform occurred rapidly and was a "top-down" change in the sense that the 1987 State Framework was assembled by an "elite" cadre of educators, and mandated the change with the next textbook adoption (1989). During the two year period there was an intensive staff development effort to assist teachers to understand and to implement the new curriculum. Nevertheless, the new curriculum set up conflicts with the skills-based orientation of many teachers, putting these teachers in an adversarial relationship with the direction of the whole language program.

Evaluation of reading or language arts "achievement" presented another significant problem for some teachers in two regards. First, a new type of assessment involved assembling portfolios and anecdotal records (Harp, 1991) and replaced the much "simpler" criterion-referenced mastery tests of the older basal series. In addition, while the curriculum materials called for a more "authentic" (and diagnostic) assessment of children's literacy development, standardized tests by which teachers and schools were evaluated remained achievement, skill, and mastery-oriented.

Thus, while some teachers eagerly accepted the new Framework and began to change their instruction, others felt some antipathy, and were forced to change, or into the appearance of change, by the new curriculum.

The implementation of such a major shift in the pedagogy of reading and language instruction such as that of the 1987 Framework, no matter how strongly mandated by the state, supported by a new curriculum, and augmented by a vigorous staff development program, is still not a certainty. Thus, one goal of the study is to describe in detail what is actually occurring in the elementary language arts classroom. For example, it is hypothesized that teacher ideas about how reading/language arts instruction should proceed will be one area in which there is substantial variability between the various language arts curriculum enactments in the classroom. Accordingly, this study investigates language arts instruction as it presently is enacted in four classrooms in a suburban public school district in Southern California.

Theoretical Baseline

The conflict between the traditional, more behaviorist, stance towards literacy instruction and the present "whole language" or social constructivist stance is a serious problem in education. The meaning of the terms used throughout this study require clarification, and thus the following definitions are offered and the terms used uniformly throughout this study.

First, teachers' thought processes and stance towards "knowing" are thought to greatly influence teacher behavior in the classroom (Clark & Peterson, 1986). The manner in which a person conceives of reality is a world view which shapes his or her orientation to curriculum and influences how the individual will conceptualize various aspects of schooling, such as educational aims, conception of the learner, the learning process, and the learning environment, conceptions of the teacher's role, and how learning should be evaluated (Miller & Seller, 1985). These orientations cluster into metaorientations which remain fairly constant over time. Miller and Seller describe three such metaorientations as the Transmission, Transaction, and Transformation Positions.

The theoretical underpinnings of whole language are constructivist in nature. Kitty Fosnot (1992) describes constructivism as follows:

> "Constructivism is a theory about both 'knowing' and 'coming to know.' Based on work in cognitive development, philosophy, and anthropology, the theory describes knowledge as temporary and non-objective, internally constructed, and socially and culturally mediated. Learning from this perspective is a self-regulatory process of struggling with the conflict between existing personal models of the world and discrepant new insights, constructing new representations and models of reality as a human meaning-making venture, and further negotiating such meaning through social cooperative activity, discourse, and debate." (p.1)

Whole language proponents are quick to assert that there is no one "whole language program" which might be packaged and used by the teacher (Goodman, 1986; Weaver, 1990). Nevertheless, there are some activities which one might expect to see and others that one might not expect to see. For example, the role of the teacher changes from "center-stage" to that of a facilitator of learning in a "community of learners engaged in activity, discourse, and reflection (Fosnot, 1992)."

A "traditional" classroom is defined for the purpose of this investigation as one that is not a whole language classroom, and thus embraces a more "transmissionist" orientation to curriculum, perhaps characterized as emphasizing subject matter achievement, skills development, or "excellence." In the traditional classroom, there will be an emphasis on mastery of subject matter, acquisition of hierarchically arranged skills presented primarily through direct instruction, with the teacher as the central authority and final arbiter of what constitutes acceptable "right" answers. Evaluation is objective testing of mastery of subject matter and skills. The literature-based language arts series will be used like a basal series, and one would expect little deviation from this state and district prescribed curriculum. One would also expect separation of the subject areas to a greater extent than that found in whole language classrooms (Weaver, 1990).

Debates over curriculum have always centered around what should be taught in schools, how instruction should proceed, and how the learning should be evaluated. Theoretically speaking, the constructivist whole language teacher's belief system should be radically different from that of a traditional transmissionist teacher. Yet teachers' practical knowledge--a nexus of knowledge of self, milieu, subject matter, curriculum, and instruction--often reflects a cognitive style that is unabashedly inconsistent in areas where purposes or constraints call for varying experiential reactions (Elbaz, 1981). Bolster (1983) refers to the teacher as a "situational decision-maker." Thus, the differences between whole language and traditional teachers may not be as great as one would normally expect to see. Additionally, a teacher's background and positivist beliefs may moderate

"cognitive perturbation" such that the teacher may be more traditional than she believes herself to be; may, in fact, be an "interactive informer" rather than a constructivist teacher (Taylor, 1990).

The following chart should assist in distinguishing between teachers who are characterized either as "whole language" or "traditional" teachers in this study:

Whole Language	**Traditional**
Transactionist/Transformationist	Transmissionist
Literacy immersion	Subject Matter (Reading)
Assessment	Evaluation
Child as capable, developing	Child as having deficits
Meaning-based activities	Hierarchical Skills orientation
Teacher as "facilitator"	Teacher at center
Social Constructivist	Behaviorist/Positivist

The primary question to be answered by the study is: How are the integrated language arts and the literature-based reading curriculum enacted in "whole language" and "traditional" elementary classrooms? Subsumed under the primary question are the following categorical questions:

1) How do teacher attitudes/beliefs/theories affect their enactment of curriculum in the elementary classroom? Using the literature-based curriculum materials:
   a) How do teachers enact a whole language program in the elementary classroom?
   b) How do teachers enact a traditional language arts program in the elementary classroom?
2) Do student attitudes toward reading and writing differ in whole language and traditional programs?
3) Does student achievement on reading and writing measures differ over time in whole language and traditional classrooms?

The ongoing debate between the proponents of whole language and those espousing more traditional and hierarchical forms of literacy education reflects the history of language arts instruction in the United States during the past one hundred years (Shannon, 1992). While the educational establishment in California, as evidenced by the 1987 Framework, is mandating a holistic and integrated approach to literacy education, it formerly advocated a basic skills approach (Framework, 1970); and prior to that, a progressive education stance as represented in A Framework for Public Education in

California (1950) under the aegis of Helen Heffernan, head of elementary education in California from 1926 to 1965 (Morpeth, 1989).

Methodology of the Study

This investigation was conducted to answer the questions of how the new literature-based reading/language arts materials are being enacted in two "whole language" and two "traditional" fourth-grade classes. The study also investigated teachers' stated intents in teaching in language arts, how a teacher's belief system or epistemological stance affects how and what is being taught, and the extent to which teacher practice has become aligned with teaching the language arts within the context of the California State English/Language Arts Framework (1987) and its "social constructivist" emphasis.

The quantitative portion of this study describes the outcome measures of traditional and whole language classrooms, while qualitative measures describe how principals, teachers, and students regard their classroom cultures "from the inside."

Four elementary language arts teachers, two traditional and two whole language, were selected from a suburban district in Southern California with a fairly homogeneous low-middle to middle-class SES. The district is in a high growth area of new homes and populations from school to school are similar in demographic variables.

Four fourth grade teachers were matched as much as possible on sex, ethnicity, educational background, and experience, so that the program became the unit of analysis as much as possible on the quantitative measures. In order to ascertain whether or not a prospective participant in the study was a "whole language" or a "traditional" teacher, two measures were applied. The DeFord Theoretical Orientation to Reading Profile or TORP (DeFord, 1985), a survey instrument, was administered by the researcher. After selecting prospective participants from those who qualified on the TORP, an unstructured interview with the teacher and observation of the teacher's classroom followed. Intact classrooms were used.

In order to establish the background for the study, it was necessary to collect data about the curriculum materials in use in the district and schools studied. The California English/Language Arts Framework sets the standard for textbook adoption by the state, and is a philosophical statement which offers a rationale for the types of curricular materials sought from textbook publishers. It also provides a pedagogical benchmark for school districts in the state. The language arts textbooks adopted by the subject school district were examined in depth and analyzed for curriculum content and intent.

To investigate teacher epistemology and to collect data about how the curriculum is perceived, principals and teachers were interviewed using an open-ended interview (Vacca, Vacca & Gove, 1990). This interview with teachers assisted in answering questions about how the teachers plan and teach the language arts. These interviews were audiotaped and transcribed to facilitate analysis of the data.

Non-participant field observations in the classrooms took place in three increments: in mid-July and mid-October 1992, and at the beginning of February 1993. During each observation "round," a full day of observation in each class took place and was videotaped in full, focusing upon classroom activities and teacher actions. The researcher took detailed field notes during the observations. Each class was also observed once during the language arts period (usually the morning) during each of three "rounds," using only field notes. Total hours of observation exceeded 100; observation time in each class ranged from 24 to 26 hours over the seven month period from mid-July 1992 to the beginning of February 1993.

Teachers participating in the study provided copies of lesson plans and curriculum materials, especially where those curriculum materials were teacher-made or an augmentation to district-provided curriculum.

The primary method of analysis of the observed data is interpretive. Where the data suggested themes or insights, specific evidence is cited. Triangulation of data from sources such as lesson plans, interviews, observations (field notes and videotapes), Framework, district and state mandated curricula, and supplementary curricula support inferences made from the data. As previously noted, the theoretical grounding is socio-cultural and constructivist in nature.

To explore the relationship between program and student attitude, arrangements were made to interview six students from each class, a stratified random sample from those students returning a parent permission letter. Returned forms were sorted into "low," "medium," and "high" ability piles and two names were picked from each pile for an open-ended interview (Vacca, Vacca & Gove, 1990). Audiotapes of the interviews were transcribed in full for data analysis. In addition, student read a short piece of literature and responded briefly in a story retelling.

Additional data on student attitude were collected. First, all students in each class were given (1) the Knudson Writing Attitude Survey, normed for grades 4-8 (Knudson, 1991); and, (2) the Elementary Reading Attitude Survey (McKenna & Kear, 1990), normed for Grades 1-6. These attitude surveys were administered in July, when year-round classes began, and again at the end of January. The results were compared statistically to determine whether significant affective differences existed between the four classes.

To compare academic outcomes between the programs, writing samples were collected from each of the classes at three points in the study: beginning (end of July 1992), middle (mid-October 1992), and end (end of January 1993). The narrative prompts used a story ending format, and students constructed the beginning (Bereiter and Scardamalia, 1982). The writing task took about 30 minutes (20 minutes writing time), and students used lined paper. Instructions for administering the writing sample were written out for teachers.

A six-point holistic scoring scale was used by two experienced readers to score the coded tests. Two readers read each paper, and if they differed by more than one point, they conferred together to reach a compromise. Interrater reliability estimates are provided elsewhere in this report. Readers selected had classroom teaching experience in evaluating student writing. A repeated measures ANCOVA holding the first writing sample constant as a pretest compared writing samples over time.

A text-based reading measure, the Nelson Reading Skills Test (Houghton-Mifflin, 1977) was administered twice: in the first month of the study (July 1992) and toward the end of the study period in January 1993. This test takes a little over one half-hour to complete and is easily administered by the classroom teacher. Two forms of the test were used to enable a pre-/post-test comparison.

Finally, the texts obtained as a result of the student interviews were analyzed for differences in the responses of students in the whole language and traditional classrooms.

At all times the researcher made every effort to preserve the integrity of the classroom, to observe in a manner which did not distract students and teachers, and which did not disturb the tenor or culture of the classroom.

Results of the Study

It should first be noted that the results presented here represent work in progress. The full data analysis and discussion will be presented in a doctoral dissertation to be completed in June 1993.

Quantitative Findings

Quantitative data analysis is essentially complete and results indicate that in reading measures there was no statistically significant difference between the two whole language classes (Teachers 1 and 2) and the two traditional classes (Teachers 3 and 4). Means of the Nelson Reading Skills Test are reported in Table 1.

Insert Table 1 about here

While the reading test results were not statistically significant, there were some interesting teacher effects apparent in the data. Teacher 1 (WL) and Teacher 4 (Trad) consistently gained on all reading measures, while Teacher 2 (WL) and Teacher 3 (Trad) consistently lost on all reading measures. This mixed result can best be explained vis-a-vis the interviews and observations about teacher practice.

Reading Attitudes were measured for recreational, academic, and total reading (McKenna & Kears, 1990). Table 2 reports the means for pretest and posttest scores for all three measures.

Insert Table 2 about here

All three measures showed statistical significance as measured by Analysis of Variance (ANOVA), but in the interest of space, only total reading attitude is reported here. Students of Teacher 2 (WL) recorded the lowest means (least liking for reading). Again, there was a split with Teachers 1 and 4 showing gains, while Teachers 2 and 3 showed losses.

In reading attitude there was also a statistically significant difference in attitude towards reading by gender, with girls liking reading more than boys in all classes. This information is shown in Table 3.

Insert Table 3 about here

Writing attitude means showed similar splits to that of reading attitude. Using Analysis of Covariance, holding the Writing Attitude Pretest constant, a significant positive change of attitude towards writing was demonstrated by the students of Teacher 4 (Traditional), and a significant negative change of attitude towards writing was demonstrated by the students of Teacher 2 (Whole Language) and Teacher 3 (Traditional). Teacher 1 (Whole Language) had a non-significant drop in student attitude toward writing.

There was no significant gender interaction. Writing attitude data is reported in Tables 4, 5, and 6.

Insert Tables 4, 5, and 6 about here

The writing samples were scored using a six-point-holistic rubric by two experienced readers. Interrater agreement was 95%. The scored samples were compared statistically using Repeated Measures Analysis of Covariance holding Writing Sample A constant as a pre-test. On Writing Sample B, statistically significant differences were found at the .0001 level between the means of the teachers and the pretest. Post hoc analysis using Tukey's HSD indicate that Teacher 4 (Traditional) outscored all others at the 0.05 level on Writing Sample B. On Writing Sample C differences between means of teachers were significant at .00005 and differences between means of C and the pretest were significant at .05. Teacher 3 (Traditional) outscored Teachers 1 and 2 (Whole Language). Teacher 4 (Traditional) outscored Teacher 1 (Whole Language). There were no gender interactions and no statistically significant differences between the writing scores of males and females. These results are set forth in Tables 7 and 8.

Insert Tables 7 and 8 here

Qualitative Findings

Analysis of qualitative findings is far from complete, and serves multiple purposes in this study.

One purpose was to describe curriculum enactments, and thus a typical language arts (gist) day in each teacher's class is presented below.

Teacher 1 (Whole Language)

Students arrive and begin a written journal activity consisting of Daily Oral Language, Daily Oral Math, and Daily Oral Analogy, while the teacher does housekeeping chores (the "oral" part of this exercise consists of discussing and correcting the written exercises together as a whole class). As students finish the written activity, they take out

self-selected reading materials for "SSR." At a prescribed time, the oral correction activities commence, with the students coming up to the chalkboard, and the teacher validating and/or extending student input. Corrected answers are chorally read by the class. Reading activities occur next, using a tradebook (O'Dell's Island of the Blue Dolphins) Students read the material orally in small groups, while the Teacher takes a small group of poor readers. This is followed by answering written comprehension questions in groups and a teacher led recitation of the answers. Then students begin a project in groups where they use Venn diagrams to compare characters. After completing the Venn diagrams, the teacher has the students share their findings. The activities run over a few minutes into recess. Other subject matter is integrated, particularly social science and science (for example, Indians of California and geography in social science; marine biology in science). Language Arts occupies a block of 2 hours and 2 minutes with no break. After recess, the flag is saluted, and the teacher may continue language arts activities for another time block of 1 hour and 15 minutes, but usually uses this part of the day for mathematics and/or P.E. Classroom management routines are strict. The teacher uses several signals for gaining control: if you are listening raise your hand, 5-4-3-2-1, give me the ready signal, repeating directions, table points given or taken away. Students frequently work in groups, but groups are tightly structured, roles are undertaken by students. The classroom is rarely noisy. It was never "out of control."

Teacher 2 (Whole Language)

Students come into the classroom, pull down chairs, and flag is saluted. The teacher orally "shares" the morning's schedule (also written on the chalkboard by times) and teacher does housekeeping chores while students begin the first task. This varies from day to day, but a typical task is to work in groups on a "Book Talk" (purpose: to validate or question our own and others' ideas) for a chapter of Island of the Blue Dolphins where students tell what they felt about Chapter 13 and what they wrote at home in their journals. They are reminded to listen, to gain eye contact, to express themselves. They are told that after 10 minutes there will be a report from one student in each group. The teacher circulates between the tables and continues housekeeping chores. Students are not on task, and the teacher gives a signal and a peptalk to get them back to the topic. After reports which vary in level of engagement, the teacher goes to a whole class format to find the most exciting passages in the chapter. They are listed on the whiteboard, students are selected to read them orally, and then language which makes them exciting is examined ("crashing" "blood"). Students move into pairs to trade off oral reading in soft voices. As

they finish they move into a writing activity which they have chosen from a list provided by the teacher. As students finish the first writing, they are told to write down their questions for Hot Seat (a student dons the persona of a character such a Karana, and students ask questions which must be answered by the student "in character"). At a prescribed time, students play Hot Seat (example question: What's it like having a sea lion come after you?) A transition occurs to a mathematics/social science exercise where students must plan a trip within California. A brainstorm on the board illustrates everything to think about for the trip. Students recap directions, move into activity, which appears somewhat chaotic and is very loud. After a prescribed time, students are stopped, told to create their own cluster as a refocusing activity, then dismissed to recess by table. The language arts block is 2 hours of unbroken time. After recess, language arts may sometimes continue, but usually mathematics is done. The teacher's main control method is the lecture, reminding students of appropriate behavior, and flicking the lights on and off. Students are frequently "off task" and noisy. Subjects are integrated. The same science and social studies curriculum as with Teacher 1 is in evidence: Indians, Marine Biology.

Teacher 3 (Traditional)

Students from all upper grade classes meet on the blacktop when the bell rings for group flag salute, patriotic song, and announcements from principal. Students then come into class, are fairly noisy as they get their papers and homework folders turned in. Teacher must repeat directions several times. The schedule for the day is written on the whiteboard. The teacher passes out a paper "feather" upon which is dittoed a story starter (one of four or five different starters) from which they are to generate a story. Teacher tries to quiet class several times, they finally settle down to write. Teacher writes the names of noisy students on the board, goes to desk and does the housekeeping chores, including recording homework (spelling, cursive). Students are told to write at least a full page. If they finish before time is called, they are to take out a book and read silently. After about 15 minutes, students volunteer to read aloud for whole class what they have written. Teacher reminds students how to listen politely. After some are shared, the papers are collected (teacher will edit and return to students for recopying). Students are now to read Island of the Blue Dolphins, Chapter 27, then to work on comprehension questions (from teacher made ditto in their notebooks) or on their travel brochure to the Island. Students may read alone, in self-selected groups, or in the corner with the teacher. After the teacher group completes the chapter, students go back to desks to work on written work, and teacher circulates to check on students' progress. Students get progressively noisier, and

teacher says Shh! many times. A transition occurs, and students change to a social studies project, building a Spanish galleon from construction paper or answering questions about various explorers from differing printed resources. Students move into groups for activity and teacher circulates to the various groups to evaluate their progress. Despite her presence, groups are noisy and off task. At a specific time, she writes homework questions on the whiteboard as a refocusing activity and students individually copy them (example: How did Cabrillo die? Which explorer would you have liked to sail with and why?). Students are dismissed to recess. The language arts block has lasted two hours. After recess, language arts is usually NOT continued. Science and social science are integrated into the language arts curriculum (e.g., explorers, and marine biology), but discrete skills are also taught using a teacher centered direct instruction method. Classroom structure follows two forms: individual work and quiet time vs. group work and noisy unstructured activity. Discipline is based on Cantor's assertive discipline.

Teacher 4 (Traditional)

Teachers 3 and 4 teach at the same school, and the upper grades meet on the blacktop for opening exercises as described above. They then lined up outside the door for directions prior to entering class, and directions were written on the whiteboard as students entered the class. As they moved to follow directions, the teacher wrote the names of misbehaving students on the board and gave checks without comment. Students took out journals and wrote about which character in Island of the Blue Dolphin they would most like to spend the day with, telling in detail why they thought it would be interesting to spend time with that character. Students were at work within 5 minutes of entering the classroom. Teacher circulated among students reminding them of topic sentence, proper heading for paper, to put in details, etc. The teacher tells a personal, humorous anecdote about imagination. Gives them 5 more minutes, then tells them to put pencils down and share stories. Journals are then put away and a spelling test is given--each group has different spelling words they have chosen. As she ends each group test, students turn over their papers and illustrate the word of their choice. After the test, students get out Island of the Blue Dolphin. A talking break is declared, and students mill around talking loudly. After about 2 minutes, students are called back to order, and the teacher reads aloud from the book, calling student attention to various aspects of the novel (example: scarcity of water then and now). Then the teacher has them write out three questions for the characters she lists so they can play Hot Seat. They play Hot Seat (example: to Captain Orlov, why did your ship look like a red bird?). Then students read more of IBD. After reading is

finished, students work on comprehension questions. Classroom control is again divided: structured and quiet when students work individually; noisy and undisciplined when groupwork is done. The language arts block is two hours, same as Teacher 3. Teacher shares many humorous anecdotes with students, often speaking conversationally, and soliciting stories of their homelife from them.

Another purpose of the qualitative data was to assist in explaining the curriculum enactments of the teachers. All teachers worked with similar curriculum in the same grade level and district. For example, all four teachers used the literature piece, Island of the Blue Dolphin, all connected social studies through Native American studies, and science through marine biology. What did they believe about the integrated language arts, literature-based instruction, and whole language?

Teacher 1 (Whole Language)

"But I tend to think with the kids I have, because they are so low in reading, that we work a lot on the auditory...and can you listen to a story first? I think it [reading] is more context, and more the auditory in the beginning. 'Cause I'm noticing that a lot of the kids concentrate too much on the words, then they don't get what's around the word. And what's around the word is more important than what the word is, is the way I feel. Variety and free-reading are really important. Kinds of activities that involved them in the stories, lots of group activities and lots of discussions."

Teacher 2 (Whole Language)

"Repetition is really important. It's not that you do the same thing over and over again but you find a variety of ways to get a child into a piece of text. You give the students strategies so that they have tools to work with in terms of their tackling difficult texts, and find out how they're making meaning from different activities. Activities are absolute motivators. To me, whole language is taking students and involving them in reading, writing, listening, and speaking. What are their thoughts and feelings? What's important to them?"

Teacher 3 (Traditional)

"Exposure to reading is the main thing, phonetic reading is very important, and simply learning sight words. I find kids now are horrid spellers, most of them. I think we do less with skills than we say we do. You can't just throw skills completely out. I think you need to maintain a balance. In the literature-based program I think the weaknesses are mainly skills weaknesses. We tend to go

to the core literature. What we are doing is, we are doing Indians right now. We're reading IBD, and after lunch I read a story about kids being on an island. We're talking about volcanic islands...so we try to tie it in as much as we can."

Teacher 4 (Traditional)

"The longer I go in the whole language approach I've got, the more I'm going back to skills. And yet, I really like the whole language approach. I enjoy teaching it that way. But I am concerned that they [students] are missing the skills, that they still need the skills and they still have to be taught. I still believe in phonics, but I really like using literature to teach reading. I like it that the literature we have in fourth grade has to do with our social studies program..I like to see the connections there. This is MUCH more of an individualized program than I think anyone would realize. I believe in a LOT of writing. I'm sure I must come across as very confused, and I guess in my own mind I still am."

In the words of the teachers, skills-based "traditional" teachers expressed concerns over whether students would learn academic material sufficiently unless directly taught them and practiced until they attained mastery. The "whole language" teachers expressed concern for the meaning of making, for the "big picture" (Purcell-Gates & Dahl, 1991) in literacy learning, immersion in literacy, and for strategies rather than skills.

Discussion

Several themes have emerged thus far from the qualitative and quantitative data.

First, there is little difference in reading outcomes, at least as measured by the Nelson Reading Skills Test. This is the fourth year that the literature-based reading programs have been used in California schools, thus all children in the study (except for a few coming from different states) have experienced the same type of reading program since the first grade. The students of skills-based teachers who augmented their programs with discrete skills instruction scored no better than the students of whole language teachers. Means on the total reading test ranged from 48.03 to 52.58 and showed that students from all four classes were roughly equivalent in reading skill, and about average on the Normal Curve Equivalent.

Second, reading attitude outcomes were mixed. The students of Teacher 1 (Whole Language) and Teacher 4 (Traditional) showed improved reading attitude between July 1992 and January 1993, while the attitudes of the students of the other two teachers

declined over the same period. A statistically significant difference in attitude by gender was present, but classes were balanced by gender, there being only a one or two student difference in either direction, thus this could not account for the difference. Interestingly, Teacher 1 and 4 began with higher scores, which got higher, while Teachers 2 and 3 began with lower scores which got lower. One difference which the qualitative data reveals is that Teacher 4 used humor extensively in her class, and Teacher 1 somewhat less so. These teachers also showed great personal interest in their students. Another difference lies in classroom management: Teachers 1 and 4 had more "order" in their classes and their students were more often "on task" and engaged with the learning than the students in the other two classes.

Writing outcomes favored Teacher 4 on Sample B and on Teachers 3 and 4 in Sample C. Students in Teacher 1's class began with the highest mean on the pretest (Writing Sample A) of 8.07, and thereafter mean scores declined: 6.6 on Writing Sample B, and 6.1 on Writing Sample C. Students in Teacher 2's class earned the lowest means throughout the samples: 6.9 (A), 6.1 (B), and 6.9 (C). Students in Teacher 3's class began with a low mean and steadily improved: 6.7 (A), 7.2 (B), and 8.3 (C). Students in Teacher 4's class began high (7.7 on A), did best on B (8.8), and fell off on C (7.5).

Outcomes of the writing tests were surprising in view of the qualitative evidence which suggested that the whole language teachers spent more time on process writing than did the traditional teachers. In examining the writing samples, it was found that students in the whole language classes were more likely to use story mapping strategies prior to writing than were students in the traditional classes. Where students spent time on elaborate story maps, there was less time left to write, these students usually wrote less on their stories, and they tended to achieve a lower score from raters. Since the writing was timed (20 minutes), and was scored on the first draft, the whole language teachers' emphasis on story mapping and process writing may have been counterproductive for this measure. Another factor which may have influenced writing scores was the whole language teachers' emphasis on detail and descriptive language, which may have led some students to write more slowly and descriptively. The use of a story ending prompt (Bereiter & Scardamalia, 1982) was intended to investigate whether children's writing could become more strategic, and therefore may have been at variance with whole language teachers' purposes.

In the traditional classes, students were used to doing "one-shot" writing samples. In Teacher 3's class, students did not edit their own papers because the teacher felt they did not write well enough to do this job. She edited papers and returned them to be recopied. In Teacher 4's class, she indicated she liked to conference with students about papers, but rarely had time with 32 students. I did not see evidence of process writing in either

traditional class during my observations, whereas in the whole language classes, I saw two different types of conferences: 1) process or content conferences; 2) evaluation or portfolio conferences. Students expected to rewrite their papers more than once.

With regard to writing attitudes, students generally were neutral. The quantitative evidence shows a mix: Teachers 1 and 4 with more positive attitudes (means: 64.14 and 68.36) and Teachers 2 and 3 with less positive attitudes (means: 57.84 and 59.48). Teacher 4's students were the only ones who showed an increase from pre to post test. Analysis of covariance (ANCOVA) holding the pretest constant, shows that there was a significant difference in student attitude towards writing at the .0001 level. Post hoc examination showed differences between Teacher 4 and Teachers 2 and 3 significant at the .05 level. Knudson (1991) found that the attitudes of students toward writing tended to become more negative as they got older. This evidence is in keeping with those findings. However, the case of Teacher 4 is interesting. In examining student interviews on reading and writing, students were extremely natural in their answers about what they liked in reading and writing. All the students interviewed liked writing, as opposed to students in the other classes, where responses were mixed. It is possible that the attitudes in Teacher 4's class are so positive because of the presence of humor in the class (Teacher 4 made students laugh frequently in her class with her anecdotes about her little dog) and because she evinced genuine interest in her students' thoughts. Of all the classes observed, Teacher 4's was the most "fun" to be in. As Goodlad (1984) documented, there is often a lack of affect in classrooms; they tend to be dull and boring. This was not the case in Teacher 4's classroom.

As previously stated, the qualitative analysis in incomplete. Student story retellings remain to be analyzed on several measures such as T-units and vividness of imagery (Morrow, 1988). The complete picture of how teachers' beliefs affect their curriculum enactments remains to be teased out from the voluminous data. Analyses of individual lessons from the videotaped observations is underway. These findings should assist in presenting a clearer picture of how teachers who are uncomfortable with the idea of whole language enact the social constructivist curriculum in their classrooms. Yet even with the partial analysis presented here, some questions are answered (while others are raised).

First, all teachers made structural changes to their classrooms. There were no ability groups in evidence, all students being involved with the same piece of literature, participating in the same activities, and turning in the same written assignments. Every teacher used a form of groupwork to facilitate participation and to assist students of varying abilities to learn. Teacher 4 was cognizant of this:

> "Well, I like the fact that they're not...the kids are not grouped because I like to have everybody in a book. I like to be able to use my own skills and my own knowledge, and my own ways of teaching to bring out those that are really gifted--to pull more out of them, and then to kind of shape it to fit those that are kind of struggling, or maybe not as good at it as others.....I mean it's so funny that they used to think that you had to be in groups to individualize and that was NOT individualizing. This is MUCH more of an individual program than I think anybody would realize... doing it this way."

All teachers in the study used activities to motivate students and were aware that "today's" students needed activity to keep them involved. When asked what kinds of activities she favored, Teacher 1 laughed and said, "Active. Whatever it is." Teacher 2 called activities "absolute motivators." The teachers were also in favor of variety. Teacher 1 evidenced the most routine in her class with the Daily Oral Language, Math, and Analogy, but she felt free to change her schedule to suit herself if she needed to do so. Teacher 2 found it "much more empowering," and stated that she used "blocks of learning, instead of segmented times."

Teachers' purposes varied. Teachers 3 and 4 were obviously concerned for discrete skills, and worked to make up for what they felt were student deficits, whether it was "horrid" spelling (Teacher 3) or rules of syllabication (Teacher 4). These teachers purchased a packaged skills curriculum called "Drop in the Bucket" which they used to teach rules of grammar and other skills in their classes. Interviews with Teachers 1 and 2 revealed that they were more concerned that students make meaning in the process of reading: a concern for the "big picture." Nevertheless, the whole language teachers also taught skills. Teacher 1 taught skills through her Daily Oral Language exercise, and through direct lessons for issue arising in the course of their writing. Teacher 2 taught skills as strategies: "tools to work with in terms of their tackling difficult texts." Students in all four classes used "sounding it out" as their main skill for understanding unknown words.

Reading strategies that I observed included: teacher oral reading; individual student oral reading (either round robin, or the ubiquitous "popcorn" reading); paired student oral reading (ear to mouth); group read arounds. Except for SSR, there was little evidence of silent reading. Students did not read silently before reading aloud, so that the material they read was new to them most of the time.

After reading, there was almost always a writing activity. For example, all four teachers used Journals or Learning Logs for reading. In Teacher 3's class I observed packets of comprehension questions which strongly resembled the questions one would find in the basal series. Students had to write connected text to answer these questions,

and they received grades for correctness as well as content. Teacher 3 continually evaluated students' responses as she circulated and monitored their progress. Several times students were told to "do it over right." Teacher 2 "trusted" her students to follow what she modeled: an intellectual curiosity about books and the world, a need to communicate ("share") thoughts and feelings, and a work ethic to be "on task" when she asked them to do something. She allowed them time to rehearse before they had to get started on a task, she gave them more time if they needed it (and they seemed to need it more often than not). I observed more "data collection sheets" in Teacher 2's room, but she also required individual written responses to literature through student Journals, and students were given choices of which generic activities they would do for a given chapter.

There was a difference in the way groups were used by the various teachers. Teachers 3 and 4 seemed to distinguish between structured individual work (room quiet, students following rules) and group work (room extremely noisy and unstructured). These teachers seemed to think that student misbehavior was an inevitable part of groupwork. They expressed frustration with the slow pace at which group projects moved, and Teacher 3 was concerned that students were not doing quality work. Neither teacher moved to structure the groupwork more toward the standards they desired. In Teacher 2's class, groupwork was somewhat more structured, for example, students often had roles to play. However, the same noise level and apparent waste of time concerned Teacher 2. When I remarked that it seemed as if it took time for them to "get their motors started," she said she agreed, but that they eventually got the job done.

In contrast, Teacher 1 had highly structured groupwork, which was used for varied purposes throughout the day. In groups of four, each student had a number, and tasks were assigned to students using this number, thereby insuring accountability of the students. Teacher 1 also demanded and got order and a low level of noise in group activities. She stopped and restarted activities if students misbehaved, and was extremely consistent with enforcing her behavioral expectations. Part of this concern for order was a function of the principal's expectations for classroom order, but Teacher 1 also used the groups more creatively than did the other teachers. For example, at the beginning of the year she taught them "how to lead a discussion." Discussion leaders at each table then led student discussion of topics and presented findings to the whole class. These roles rotated among the students.

All four teachers used the word "facilitator" when asked what they thought the teacher's role should be, but with varying reactions to the "buzz" word. Teacher 2 felt the most strongly about the teacher as facilitator, resource, and guide. She felt students should learn how to think and make decisions for themselves and the classroom milieu should

Differences in writing achievement were significant and have already been discussed. Students in traditional classes "outwrote" students in whole language classes. Further study is needed to determine whether an initial "overlearning" of story mapping may actually hinder students on first draft writing assessments. Writing attitudes were mixed between whole language and traditional teachers, with Teacher 4 again showing statistically significant positive means over Teachers 2 and 3, but not Teacher 1.

The findings indicate that on three of four outcome measures, there was little difference between whole language and traditional classes. The findings presented herein must be regarded as preliminary in nature, and may not generalize to other populations. Further study is needed, especially in designing instruments sensitive enough to detect differences in student independence and thinking. More traditional measures of student outcomes, such as standardized tests of reading, may not be sensitive enough to measure these changes. More work is also needed to determine the effect of overlearning of process writing strategies on writing assessment. Will whole language students internalize the story mapping strategy into their executive control and will it eventually assist them to write better first drafts?

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Table 1. Nelson Reading Skills Test. Pre and Posttest Scores by Teacher.

1.1 Nelson Reading Skills Word Test

Teacher	N	Variable	Mean	Standard Deviation
1	28	NWPre	46.71	13.88
1	29	NWPos	48.52	17.40
2	27	NWPre	50.37	19.42
2	25	NWPos	48.96	16.89
3	31	NWPre	50.19	16.69
3	31	NWPos	49.16	13.78
4	31	NWPre	48.06	16.30
4	31	NWPos	54.06	21.00

1.2 Nelson Reading Skills Comprehension Test

Teacher	N	Variable	Mean	Standard Deviation
1	28	NCompPre	46.00	20.76
1	28	NCompPos	52.82	12.14
2	27	NCompPre	56.22	14.06
2	25	NCompPos	53.92	17.41
3	31	NCompPre	53.39	17.83
3	31	NCompPos	49.81	18.13
4	31	NCompPre	52.61	19.93
4	31	NCompPos	55.39	20.05

Table 1. Nelson Reading Skills Test. Pre and Posttest Scores by Teacher (Continued).

1.3 Nelson Reading Skills Total Reading Scores

Teacher	N	Variable	Mean	Standard Deviation
1	28	NTotPre	47.07	17.35
1	28	NTotPos	50.00	10.05
2	27	NTotPre	53.89	13.57
2	25	NTotPos	51.56	15.20
3	31	NTotPre	52.45	17.55
3	31	NTotPos	48.03	15.41
4	31	NTotPre	51.25	18.29
4	31	NTotPos	52.58	18.37

Note: Analysis of Variance (ANOVA) tests reflect no statistically significant differences between the means on any of the Nelson Reading Skills Test measures.

Table 2. Reading Attitude Pre and Posttest Scores by Teacher.

2.1 Reading Attitude--Recreational Reading

Teacher	N	Variable	Mean	Standard Deviation
1	27	RARecPre	50.30	29.01
1	29	RARecPos	58.76	31.45
2	27	RARecPre	34.89	26.89
2	26	RARecPos	28.69	26.26
3	32	RARecPre	48.31	22.69
3	30	RARecPos	39.10	27.83
4	31	RARecPre	62.26	29.68
4	28	RARecPos	58.00	25.11

2.2 Reading Attitude--Academic Reading

Teacher	N	Variable	Mean	Standard Deviation
1	27	RAAcaPre	59.04	28.57
1	29	RAAcaPos	56.62	28.82
2	27	RAAcaPre	38.78	28.25
2	26	RAAcaPos	38.96	28.60
3	32	RAAcaPre	37.34	25.65
3	30	RAAcaPos	31.30	25.09
4	31	RAAcaPre	61.39	33.19
4	28	RAAcaPos	65.68	26.14

Table 2. Reading Attitude Pre and Posttest Scores by Teacher (Continued).

2.3 Reading Attitude--Total Reading

Teacher	N	Variable	Mean	Standard Deviation
1	27	RATotPre	54.55	30.02
1	29	RATotPos	57.93	30.04
2	27	RATotPre	35.00	28.28
2	33	RATotPos	25.24	28.38
3	32	RATotPre	40.81	23.33
3	30	RATotPos	32.97	25.43
4	31	RATotPre	61.74	32.38
4	28	RATotPos	63.07	24.87

Table 3. Reading Attitude of Students (Total Reading) Posttest Score Comparison Using Analysis of Variance and Tukey's HSD Post Hoc Comparisons

Source	df	SS	MS	F Value	Pr > F
Model	4	35815.99	8953.99	12.59	0.0001 **
Error	115	81766.80	711.02		
Corr. Tot.	119	117582.8			

R-Square	0.3046	C.V. 60.74	Root MSE	26.665	RATotPos Mean 43.90

Source	df	Type III SS	MS	F Value	Pr > F
Teacher	3	30272.36	10090.79	14.19	0.0001 **
Gender	1	4741.94	4741.94	6.67	0.0111 *

Tukey's Studentized Range (HSD) Test
Alpha=0.05 Confidence=0.95 df=115 MSE=711.0157
Critical Value of Studentized Range=3.687

Teacher Comparison	Simultaneous Low Conf. Limit	Difference Between Means	Simultaneous Upper Conf. Lim	
4 - 1	-13.278	5.140	23.558	
4 - 3	11.838	30.105	48.371	*
4 - 2	19.968	37.829	55.690	*
1 - 4	-23.558	-5.140	13.278	
1 - 3	6.862	24.964	43.067	*
1 - 2	14.995	32.689	50.382	*
3 - 4	-48.371	-30.105	-11.838	*
3 - 1	-43.067	-24.964	- 6.862	*
3 - 2	- 9.812	7.724	25.260	
2 - 4	-55.690	-37.829	-19.968	*
2 - 1	-50.382	-32.689	-14.995	*
2 - 3	-25.260	- 7.724	9.812	

* indicates significance at the 0.05 level.

Tukeys's Studentized Range (HSD) Test for Gender
Alpha=0.05 df=115 MSE=711.0157
Means with the same letter are not significantly different

Tukey Grouping	Mean	N	Gender
A	50.365	63	1 (female)
B	36.754	57	2 (male)

Table 4. Writing Attitudes of Students Pre and Posttest Scores by Teacher (Total of All Answers).

Teacher	N	Variable	Mean	Standard Deviation
1	28	WritAttPre	67.39	9.16
1	29	WritAttPos	6414	9.03
2	21	WritAttPre	59.29	9.14
2	25	WritAttPos	57.84	10.18
3	28	WritAttPre	61.75	13.66
3	31	WritAttPos	59.48	13.46
4	27	WritAttPre	63.96	13.93
4	28	WritAttPos	68.36	10.87

Table 5. Test of Change of Attitude Toward Writing in Students due to Teacher and Gender Using Analysis of Covariance.

Dependent Variable:		Writing Attitude Posttest			
Source	df	SS	MS	F Value	Pr > F
Model	8	4148.31	518.54	4.58	0.0001**
Error	95	10758.59	113.25		
Corrected	103	14906.88			
R-Square	0.2783	C.V. 16.98	Root MSE	10.64	WAPre Mean 62.67

Source	df	Type IIISS	Mean Square	F Value	Pr > F
Teacher	3	1262.21	420.74	3.72	0.0141*
WA Pre	1	1824.08	1824.08	16.11	0.0001**
Gender	1	65.11	65.11	0.57	0.4502
Tch*Gen	3	104.44	34.81	0.31	0.8200

*** Significant at .05** **** Significant at .0001**

Table 6. Tukey's Studentized Range (HSD) Test for Variable Writing Attitude Posttest.

Alpha=.05 Confidence=0.95 df=95 MSE=113.25
Critical Value of Studentized Range=3.698
Comparisons significant at .05 level are indicated by *

Teacher Comparison	Simultaneous Lower Conf. Lvl.	Difference Between Means	Simultaneous Upper Conf. Lvl.
4 - 1	-3.423	4.083	11.590
4 - 3	1.006	8.512	16.098 *
4 - 2	3.141	11.238	19.335 *
1 - 4	-11.590	- 4.083	3.423
1 - 3	- 3.009	4.429	11.866
1 - 2	- 0.879	7.155	15.188
3 - 4	-16.018	- 8.512	- 1.006 *
3 - 1	-11.866	4.429	3.009
3 - 2	- 5.307	2.726	10.760
2 - 4	-19.335	-11.238	- 3.141 *
2 - 1	-15.188	- 7.155	0.879
2 - 3	-10.760	- 2.726	5.307

Tukey Grouping by Gender

Tukey Grouping	Mean	N	Gender
A	64.259	54	1 (Female)
A	60.960	50	2 (Male)

Means with the same letter are not significantly different.

Table 7. Repeated Measures Analysis of Covariance (ANCOVA) for Writing Samples--Writing Sample A (July 1992) Held Constant as Pretest.

7.1 Writing Sample B (October 1992)

Source	df	SS	MS	F Value	Pr > F
Model	4	217.34	54.33	11.73	0.0001 **
Error	94	435.57	4.64		
Corr.Tot.	98	652.91			
					Writ B Mean
R-Square	0.3329	C.V. 29.48	Root MSE	2.1526	7.303

Source	df	Type III SS	MS	F Value	Pr > F
Teacher	3	126.17	42.06	9.08	0.0001 **
Writ A	1	92.87	92.87	20.04	0.0001 **

Tukey's Studentized Range (HSD) Test for Writing Sample B
Alpha=0.05 Confidence=0.95 df=94 MSE=4.633
Comparisons significant at the .05 level are indicated by *

Teacher Comparison	Simultaneous Low Conf. Limit	Difference Between Means	Simultaneous Upper Conf. Lim
4 - 3	0.3398	1.3585	3.3771 *
4 - 1	1.0825	2.6620	4.2416 *
4 - 2	1.1260	2.7870	4.4481 *

7.2 Writing Sample C (January 1993)

Source	df	SS	MS	F Value	Pr > F	
Model	4	106.57	26.64	5.77	0.0004	*
Error	85	392.31	4.62			
Corr.Tot.	89	498.88				
					Writ C Mean	
R-Square	0.2136	C.V. 30.21	Root MSE	2.1484	7.111	

Source	df	Type III SS	MS	F Value	Pr > F	
Teacher	3	91.19	30.40	6.59	0.0005	*
Writ A	1	27.33	27.33	5.92	0.0170	*

Tukey's Studentized Range (HSD) Test for Writing Sample C
Alpha=0.05 Confidence=0.95 df=85 MSE=4.6154
Comparisons significant at the .05 level are indicated by *

Teacher Comparison	Simultaneous Low Conf. Lim	Difference Between Means	Simultaneous Upper Conf. Lim	
3 - 4	-1.0885	0.5543	2.1972	
3 - 2	0.1057	1.3611	3.6166	*
3 - 1	0.6411	2.2500	3.8589	*
4 - 3	-2.1972	-0.5543	1.0885	
4 - 2	-0.4650	1.3068	3.0785	
4 - 1	0.0690	1.6957	3.3223	*
2 - 3	-3.6166	-1.8611	-0.1057	*
2 - 4	-3.0785	-1.3068	0.4650	
2 - 1	-1.3515	0.3889	2.1292	
1 - 3	-3.8589	-2.2500	-0.6411	*
1 - 4	-3.3223	-1.6957	-0.0690	*
1 - 2	-2.1292	-0.3889	1.3515	

Table 8. Means for Writing Samples by Teacher.

Teacher	N	Variable	Mean	Std. Dev.
1	27	Writing A	8.07	1.88
	25	Writing B	6.60	2.57
	28	Writing C	6.11	2.41
2	25	Writing A	6.88	2.47
	27	Writing B	6.15	2.13
	24	Writing C	6.92	2.75
3	30	Writing A	6.67	2.31
	30	Writing B	7.12	2.25
	27	Writing C	8.30	2.02
4	29	Writing A	7.69	2.58
	30	Writing B	8.80	2.70
	27	Writing C	7.52	2.17